

In the claims:

Please amend the claims as shown below:

- 5 1. (Currently amended) A sensor device comprising:
a roller ~~(36)~~ in operative engagement with a housing ~~(24)~~;
a peltier element ~~(38, 38.1)~~ ~~attached to the housing (24)~~
disposed inside the roller and having a cooled surface ~~(41)~~
and a heated surface ~~(43)~~, the peltier element being connected
10 to a power source ~~(14)~~ to obtain a temperature difference
between the cooled surface and the heated surface thereof, the
surface ~~(41)~~ being cooled by the peltier element and the inner
surface ~~(43)~~ being heated by the peltier element and directed
in a direction that is opposite the direction of the surface
15 ~~(41)~~, the surface ~~(41)~~ being in operative engagement with an
inside surface of the roller ~~(36)~~ to cool the roller ~~(36)~~.

2. (Currently amended) The sensor device according to claim 1
wherein heat is led away from the heated surface ~~(43)~~ and the
20 surface ~~(43)~~ is in contact with the housing ~~(24)~~ that has a
high heat conductivity and formed with an area of flanges ~~(28)~~
in order to increase heat transfer to another medium that is
in contact with the flanges ~~(28)~~.

- 25 3. (Currently amended) The sensor device according to claim 1
wherein ~~the~~ a segment ~~(24)~~ is in operative thermal contact

with a volume ~~(25)~~ containing another material ~~(27)~~ that has high thermal capacity and stores heat from the inner surface ~~(43)~~.

5 4. (Currently amended) The sensor device according to claim 1 wherein ~~a~~ the peltier element ~~(38, 38.1)~~ is held against the housing ~~(24)~~ by a holder ~~30~~ made of a material with low heat conductivity.

10 5. (Currently amended) The sensor device according to claim 1 wherein a cover plate ~~(42)~~, in contact with the peltier element, bears against a surface of the roller ~~(36)~~.

15 6. (Currently amended) The sensor device according to claim 5 wherein the peltier element ~~(38, 38.1)~~ is in operative engagement with the cylindrical outer surface of the roller ~~(36)~~.

20 7. (Currently amended) The sensor device according to claim 1 wherein the roller ~~(36)~~ is rotatably attached to ~~a~~ the housing ~~(24)~~ and is made of a material with high heat conductivity.

25 8. (Currently amended) The sensor device according to claim 6 wherein the roller ~~(36)~~ is in contact with an isolation material ~~(29)~~ that is cooled by the peltier element ~~(38.1)~~.

9. (Previously presented) A sensor device comprising:

a peltier element ~~(38)~~ held by a holder ~~(30)~~ attached by threads to an outer end ~~(26)~~ of a housing ~~(24)~~, the housing having an enlarged cooling segment with outwardly protruding flanges that completely surrounds the peltier element, the enlarged cooling segment being made of a material with a high heat conductivity;

the peltier element ~~(38)~~ being in contact with the housing ~~(24)~~ and disposed on the outer end ~~(26)~~;

the peltier element having a cooled surface ~~(41)~~ and a heated surface ~~(43)~~, the peltier element being connected to a power source ~~(14)~~ to obtain a temperature difference between the cooled surface and the heated surface thereof, the surface ~~(41)~~ being cooled by the peltier element and the inner surface ~~(43)~~ being heated by the peltier element and directed in a direction that is opposite the direction of the surface ~~(41)~~;

the surface ~~(41)~~ providing a cooled testing surface, the surface ~~(43)~~ being in contact with the housing ~~(24)~~ that has a high heat conductivity for effectively transferring heat from the surface ~~(43)~~ and the housing ~~(24)~~ having a volume for absorbing the heat, the housing having a surface formed with an area of flanges ~~(28)~~ in order to increase heat transfer to another medium that is in contact with the flanges ~~(28)~~;

the holder ~~(30)~~ being made from a material with a low heat conductivity, that is lower than the high heat conductivity of the enlarged cooling element of the housing ~~(24)~~, to avoid heat transfer between the cold surface ~~(41)~~ and the hot

surface ~~(43)~~.

10. (Currently amended) The sensor device according to claim 9
wherein the sensor device has a cover plate ~~(36)~~ held by the
5 holder ~~(30)~~.

11. (Currently amended) The sensor device according to claim 9
wherein the housing has a cavity ~~(25)~~ defined therein, the
cavity ~~(25)~~ contains a material ~~(27)~~ that has a high thermal
10 capacity higher than a thermal capacity of the housing ~~(24)~~
for storing heat from the inner surface ~~(43)~~.